



6CL8-A

# 6CL8-A

## MEDIUM-MU TRIODE— SHARP-CUTOFF TETRODE

9-PIN MINIATURE TYPE

With heater having controlled warm-up time

**GENERAL DATA****Electrical:**

Heater, for Unipotential Cathodes:

Voltage (AC or DC) . . . . .	6.3	volts
Current . . . . .	0.45 ± 6%	amp
Warm-up time (Average) . . . . .	11	sec

Direct Interelectrode Capacitances:

	Without External Shield	With External Shield <sup>0</sup>	
<b>Triode Unit:</b>			
Grid to plate . . . . .	1.8	1.8	μμf
Grid to cathode, tetrode cathode & internal shield, and heater . . . . .	2.8	2.8	μμf
Plate to cathode, tetrode cathode & internal shield, and heater . . . . .	1.5	2	μμf
<b>Tetrode Unit:</b>			
Grid No.1 to plate . . . . .	0.02 max.	0.01 max.	μμf
Grid No.1 to cathode & internal shield, grid No.2, and heater . . . . .	5	5	μμf
Plate to cathode & internal shield, grid No.2, and heater . . . . .	2	3	μμf
Tetrode grid No.1 to triode plate . . . . .	0.015 max.	0.01 max.	μμf
Tetrode plate to triode plate . . . . .	0.15 max.	0.03 max.	μμf
Heater to cathode (Each Unit) . . . . .	3	3 <sup>0</sup>	μμf

**Characteristics, Class A<sub>1</sub> Amplifier:**

	Triode Unit	Tetrode Unit	
Plate Voltage . . . . .	125	100 125	volts
Grid-No.2 Voltage . . . . .	—	70 125	volts
Grid-No.1 Voltage . . . . .	—1	— —1	volt
Amplification Factor . . . . .	40	— —	
Plate Resistance (Approx.) . . . . .	5000	— 200000	ohms
Transconductance . . . . .	8000	7000 6500	μmhos
Plate Current . . . . .	14	— 12	ma
Grid-No.2 Current . . . . .	—	— 4	ma
Grid-No.1 Voltage (Approx.) for plate μa = 20 . . . . .	—9	— —9	volts

← Indicates a change.

6CL8-A



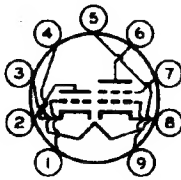
6CL8-A

# MEDIUM-MU TRIODE— SHARP-CUTOFF TETRODE

## **Mechanical:**

Operating Position. . . . . Any  
 Maximum Overall Length. . . . . 2-3/16"  
 Maximum Seated Length. . . . . 1-15/16"  
 Length, Base Seat to Bulb Top (Excluding tip) 1-9/16"  $\pm$  3/32"  
 Diameter. . . . . 0.750" to 0.875"  
 Dimensional Outline. . . . . See General Section  
 Bulb. . . . . T6-1/2  
 Base. . . . . Small-Button Noval 9-Pin (JEDEC No. E9-1)  
 Basing Designation for BOTTOM VIEW. . . . . 9FX

Pin 1—Triode Grid  
 Pin 2—Triode Plate  
 Pin 3—Triode  
           Cathode  
 Pin 4—Heater  
 Pin 5—Heater  
 Pin 6—Tetrode Plate



Pin 7—Tetrode  
           Grid No.2  
 Pin 8—Tetrode  
           Cathode,  
           Internal  
           Shield  
 Pin 9—Tetrode  
           Grid No.1

## **CONVERTER**

### → **Maximum Ratings, Design-Maximum Values:**

	Triode Unit as Osc.	Tetrode Unit as Mixer	
PLATE VOLTAGE. . . . .	330 max.	330 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE. . . . .	—	330 max.	volts
GRID-No.2 VOLTAGE. . . . .	—	See Grid-No.2 Input	
Rating Chart at front of Receiving Tube Section			
GRID-No.1 (CONTROL-GRID) VOLTAGE:			
Positive-bias value. . . . .	0 max.	0 max.	volts
GRID-No.2 INPUT:			
For grid-No.2 voltages up to 165 volts. . . . .	—	0.55 max.	watt
For grid-No.2 voltages between 165 and 330 volts. . . . .	—	See Grid-No.2 Input	
Rating Chart at front of Receiving Tube Section			
PLATE DISSIPATION. . . . .	2.5 max.	3 max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode. . . . .	200 max.	200 max.	volts
Heater positive with respect to cathode. . . . .	200 <sup>▲</sup> max.	200 <sup>▲</sup> max.	volts

→ Indicates a change.



6CL8-A

6CL8-A

**MEDIUM-MU TRIODE—  
SHARP-CUTOFF TETRODE**

**Maximum Circuit Values:**

	<i>Triode Unit</i>	<i>Tetrode Unit</i>	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation. . .	0.5 max.	0.25 max.	megohm
For cathode-bias operation. .	1 max.	1 max.	megohm
○ With external shield JEDEC No.315 connected to cathode of unit under test except as noted.			
● With external shield JEDEC No.315 connected to ground.			
▲ The dc component must not exceed 100 volts.			